

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Entergy Gulf States Louisiana, LLC
Louisiana Station 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186
Activity Number: PER20040001
Proposed Permit Number: 0840-00181-V2**

I. APPLICANT

Company:

Entergy Gulf States Louisiana, LLC
639 Loyola Avenue (L-ENT-5E)
New Orleans, Louisiana 70113

Facility:

Louisiana Station 1 Electrical Generating Plant
Gulf States Rd W @ Scenic Hwy
Baton Rouge, East Baton Rouge Parish, Louisiana
Approximate UTM coordinates for the facility are 673.8 km East, 3374.2 km North,
Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

Entergy Gulf States Louisiana (EGSL) owns and operates the Louisiana Station No. 1 Electrical Generating Plant, an existing fossil fuel fired steam/electric existing co-generation facility. The Louisiana Station No. 1 Electrical Generating Plant is located along the banks of the Mississippi River in Baton Rouge, Louisiana on Gulf States Road. EGSL became the new owner/operator of Louisiana Station 1 from Entergy Gulf States, Inc. (EGSI) on March 24, 2008. The facility currently operates under Permit Nos. 0840-00181-V1, issued July 7, 2000, 0840-00181-IV2, issued September 28, 2005, and PSD-LA-538(M-3), issued November 9, 1999.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

The Louisiana Station 1 Electrical Generating Plant is a designated Part 70 source. Several Part 70 permits have been issued to the operating units for the facility.

Permit No.	Date Issued	Unit or Source
0840-00181-IV1	September 28, 2005	C1- Unit 1A Boiler
0840-00181-V1	November 20, 2003	C2 – Unit 2A Boiler
PSD-LA-538(M-3)	November 9, 1999	C3 – Unit 3A Boiler
		C4 – Unit 4A Turbine/HRSG
		C5 – Unit 5A Turbine/HRSG
		C9 – Unit 9 Boiler
		T-23 – Gasoline Storage Tank
		FUG1 – Fugitives

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by EGSI on June 1, 2004, requesting a Part 70 operating permit renewal. Additional information dated October 27, 2005, March 28, April 26, June 29, July 19, September 21, 2007, January 10, April 18, August 6, September 25, and November 7 and 26, 2008, was also received.

Project

The Louisiana Station No. 1 Electrical Generating Plant is comprised of four fossil fuel fired boiler units and two combustion turbines. Each turbine is equipped with a heat recovery steam generator (HRSG). The boilers are permitted to burn natural gas, No. 2 fuel oil, and refinery fuel gas. The two turbines are permitted to burn natural gas and refinery fuel gas. Fuel combustion is the primary source of air emissions from the facility.

EQT008, C1 – Unit 1A Boiler, which burns natural gas as its primary fuel, refinery gas as its secondary fuel, and No. 2 fuel oil as its tertiary fuel, has a maximum heat input of 836 MM BTU/hr. EQT009, C2 – Unit 2A Boiler, which burns natural gas as its primary fuel, refinery gas as its secondary fuel, and No. 2 fuel oil as its tertiary fuel, has a maximum heat input of 836 MM BTU/hr. EQT010, C3 – Unit 3A Boiler, which burns natural gas as its primary fuel, refinery gas as its secondary fuel, and No. 2 fuel oil as its tertiary fuel, has a maximum heat input of 836 MM BTU/hr. Emissions from the three boilers exit out of the stacks, C1, C2, and C3. EQT011, C4 – Unit 4A Turbine/HRSG, and EQT012, C5 – Unit 5A Turbine/HRSG, burn natural gas as its primary fuel, refinery gas as its secondary fuel, and have maximum heat inputs of 1,654 MM BTU/hr and 2,250 MM BTU/hr, respectfully. Emissions from Unit 4A exhaust out of one stack, C4,

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

and emissions from Unit 5A exhaust out of one stack, C5. EQT013, C9 – Unit 9 Boiler, which burns natural gas as its primary fuel, refinery gas as its secondary fuel, and No. 2 fuel oil as its tertiary fuel, has a maximum heat input of 630 MM BTU/hr. The Unit 9 Boiler exhausts out of one stack, C9.

Entergy shall have the operational flexibility to fire up to 5,000 gallons per year of condensate liquid fuel. The condensate liquid fuel will be collected in the knock-out system associated with the refinery gas supply. The condensate is composed of various light-end hydrocarbons with some water. The boiling range is 150 – 1000°F and sulfur content is approximately 0.15% by weight. The condensate liquid will be fired in EQT008, C1 – Unit 1A, through a dedicated burner. Emissions from condensate are similar to those for other permitted fuels (refinery gas and No. 2 fuel oil).

Each boiler or turbine/HSRG unit operates under different alternate operating scenarios which represent the different type of fuel currently fired in the boiler. Also, the boiler and turbine/HSRG units have been separated into individual process groups (PCS). For example, C1 – Unit 1A Boiler will be permitted as PCS001: EQT008, C1 – Unit 1A Boiler, SCN001, Sc. 1 – C1 Natural Gas Fired, SCN002, Sc. 2 – C1 No. 2 Fuel Oil, SCN003, Sc. 3 – C1 Refinery Gas Fired, and GRP006, SCN 17 - C1 Condensate Liquid Fuel Fired.

After EQT012, C5 – Unit 5A Turbine/HRSG, is commercially proven, EQT013, C9 – Unit 9 Boiler, will be operated only if any of EQT008, C1 - Unit 1A Boiler, EQT009, C2 – Unit 2A Boiler, EQT010, C3 – Unit 3A Boiler, EQT011, C4 – Unit 4A Turbine/HRSG, or EQT012, C5 – Unit 5A Turbine/HRSG, is out of service subject to start-up/shutdown procedures. EQT013 will be operated so that its emission of any given pollutant plus residual start-up/shut-down emissions do not exceed the allowed rates for the down unit.

Although not expected, under some circumstances at the Louisiana Station 1 Electrical Generating Plant, the under-controlled unit may operate at more than 10% greater than its averaging capacity in the future for continued service. Based on the sum of averaging capacities, the plant operates at about 1.65 million pounds of steam hourly. At 2.2 million pounds of steam, the under-controlled unit would still not exceed 110%. Even at this higher rate the plant-wide emissions would not exceed the maximum allowed under the facility wide average.

This permit renewal includes start-up/shut-down calculations and therefore will constitute a minor modification. Entergy defines start-up as first firing the boilers until the unit achieves stable operation. The total annual start-up hours for any one of the boilers, Unit 1A, Unit 2A, Unit 3A, or Unit 9, are 400 hours per year. The total annual start-up hours for Unit 4A Turbine/HRSG are 360 hours per year each. The water injection system of Unit 4A Turbine/HRSG is not used during start-up because of operating work practice standards. The total annual start-up hours for Unit 5A

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Turbine/HRSG are 480 hours per year. Start-up/shut-down calculations are based on existing AP-42 factors, stack test results, and manufacture data for the units.

Proposed Permit

Permit 0840-00181-V2 is the proposed renewal and minor modification of Part 70 operating for the Louisiana Station 1 Power Plant. Permit 0840-00181-IV2 is the proposed acid rain permit renewal for the Louisiana Station 1 Power Plant. Permit 2433-IR0 is the proposed CAIR permit for the Louisiana Station 1 Power Plant.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM ₁₀	161.50	227.28	+ 65.78 *
SO ₂	5,377.40	4,459.40	- 918.00
NO _x	5,009.90	3,723.20	-1,286.70
CO	2,172.70	1,949.30	- 223.40
VOC *	55.90	68.33	+ 12.43

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
Benzene	-	0.01	+ 0.01
Ethyl benzene	-	< 0.01	+ < 0.01
Formaldehyde	-	4.66	+ 4.66
n-Hexane	-	0.05	+ 0.05
Toluene	-	0.27	+ 0.27
Xylene	-	< 0.01	+ < 0.01
Total	-	4.99	+ 4.99

Other VOC (TPY): 70.68

Non-VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Sulfuric Acid - < 0.01 + < 0.01

Supplemental LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
2,2,4-Trimethylpentane	-	< 0.01	+ < 0.01

* The PM₁₀ annual emissions have increased above the significance level primarily because of changes in the AP-42 factors used to calculate the PM₁₀ emissions. The

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

previous permit, 0840-00181-V1, used emission factors from the 4th edition of AP-42, first issued in 1985 until 1993. The 5th edition was published in 1995 with revised sections which increased the AP-42's factors. For example, the earlier edition used an emission factor of 3 lb/MMCF for PM₁₀ and the current AP-42 uses an emission factor of 7.6 lb/MMCF in the 2004 revised application. Therefore, PSD review is not necessary for the increase in PM₁₀ emissions for emission factor changes.

The permitted potential to emit is based on the type of fuel fired, natural gas, No. 2 fuel oil, or refinery gas, which represents the maximum emissions generated while firing a particular fuel (operating scenario). For example, the PM₁₀ emissions are highest when No. 2 fuel oil is fired in the Unit 1A Boiler. First, the annual emission rates are compared for the three alternate operating scenarios: SCN001, Sc. 1 – C1 Natural Gas Fired at 29.29 TPY PM₁₀; SCN002, Sc. 2 – C1 No. 2 Fuel Oil at 42.80 TPY PM₁₀; SCN003, Sc. 3 – C1 Refinery Gas Fired TPY PM₁₀ at 29.29 TPY PM₁₀. SCN002 operates at the level of 42.80 TPY PM₁₀; thus, 42.80 TPY PM₁₀ represents the maximum PM₁₀ emissions for the Unit 1A Boiler is displayed in the process group, PCS001.

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

See Table 1 and 2.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

* The regulations indicated above are State Only regulations.

▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

KEY TO MATRIX

- 1 -The regulations have applicable requirements that apply to this particular emission source.
- The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank – The regulations clearly do not apply to this type of emission source.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Table 2. Explanation for Exemption Status or Non-Applicability of a Source

ID No:	Requirement	Notes
UNF001	<p>Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B.2]</p> <p>Chemical Accident Prevention and Minimization of Consequences [LAC 33:III.5901]</p>	<p>EXEMPT. Electric utility steam-generating units are exempt from the requirements of LAC 33:III.Chapter 51 Subchapter A.</p> <p>DOES NOT APPLY. The Louisiana Station 1 Electrical Generating Plant contains no sources which produce, handle, process, or store substances listed in LAC 33:III.5907.A Table A in quantities greater than the listed threshold.</p>
	<p>Compliance Assurance Monitoring [40 CFR 64.2(b)(1)(ii)]</p> <p>Chemical Accident Prevention Provisions [40 CFR 68]</p>	<p>EXEMPT. The Louisiana Station 1 Electrical Generating Plant is subject to Acid Rain requirements.</p> <p>DOES NOT APPLY. The Louisiana Station 1 Electrical Generating Plant contains no sources which produce, handle, process, or store substances listed in 40 CFR 68.130 in quantities greater than the listed threshold.</p>
EQT008, EQT010	<p>Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B.3]</p> <p>NSPS - Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 [40 CFR 60.40(c)]</p> <p>NSPS - Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 [40 CFR 60.40Da(a)(1)]</p> <p>NSPS - Subpart Db - Standards of Performance for Industrial Commercial-Institutional Steam Generating Units [40 CFR 60.40b(a)]</p> <p>NSPS - Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60.40c(a)]</p>	<p>EXEMPT. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of LAC 33:III.Chapter 51 Subchapter A.</p> <p>DOES NOT APPLY. Boilers were initially constructed and began operation prior to August 17, 1971.</p> <p>DOES NOT APPLY. Boilers were initially constructed and began operation prior to September 18, 1978.</p> <p>DOES NOT APPLY. Boilers were initially constructed and began operation prior to June 19, 1984.</p> <p>DOES NOT APPLY. Boilers operate at a maximum heat capacity greater than 100 MM BTU/hr.</p>

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Table 2. Explanation for Exemption Status or Non-Applicability of a Source

ID No:	Requirement	Notes
EQT011	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B.3]	EXEMPT. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of LAC 33:III.Chapter 51 Subchapter A.
EQT012	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B.3]	EXEMPT. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of LAC 33:III.Chapter 51 Subchapter A.
EQT013	Control of Emissions of Nitrogen Oxides (NO _x) [LAC 33:III.2201.C.6]	EXEMPT. C9 - Unit 9 Boiler operates less than 400 hours during the ozone season.
	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B.3]	EXEMPT. Emissions from the combustion of Group 1 virgin fossil fuels are exempt from the requirements of LAC 33:III.Chapter 51 Subchapter A.
	NSPS - Subpart D—Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 [40 CFR 60.	DOES NOT APPLY. Boilers were initially constructed and began operation prior to August 17, 1971.
	NSPS - Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 [40 CFR 60.40Da(a)(1)]	DOES NOT APPLY. Boilers were initially constructed and began operation prior to September 18, 1978.
	NSPS - Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60.40b(a)]	DOES NOT APPLY. Boilers were initially constructed and began operation prior to June 19, 1984.
	NSPS - Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60.40c(a)]	DOES NOT APPLY. Boilers operate at a maximum heat capacity greater than 100 MM BTU/hr.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Table 2. Explanation for Exemption Status or Non-Applicability of a Source		
ID No:	Requirement	Notes
EQT014, EQT020	<p>NSPS – Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 [40 CFR 60.110(a)]</p> <p>NSPS – Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 [40 CFR 60.110a(a)]</p> <p>NSPS – Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60.110b(a)]</p>	<p>DOES NOT APPLY. Gasoline tank has a storage capacity less than 40,000 gallons.</p> <p>DOES NOT APPLY. Gasoline tank has a storage capacity less than 40,000 gallons.</p> <p>DOES NOT APPLY. Gasoline tank has a storage capacity less than 19,813 gallons.</p>
EQT021	<p>NESHAP Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Cooling Towers [40 CFR 63.400(a)]</p>	<p>DOES NOT APPLY. The cooling tower does not use chromium based water treatment chemicals in the cooling water or cooling towers.</p>
EQT022, EQT023, EQT024	<p>Storage of Volatile Organic Compounds [LAC 53:III.2103.A]</p> <p>NSPS – Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 [40 CFR 60.110(a)]</p> <p>NSPS – Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 [40 CFR 60.110a(a)]</p>	<p>DOES NOT APPLY. Tanks do not store volatile organic compounds.</p> <p>DOES NOT APPLY. Tanks do not store petroleum liquids.</p> <p>DOES NOT APPLY. Tanks do not store petroleum liquids.</p>

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Table 2. Explanation for Exemption Status or Non-Applicability of a Source

ID No.	Requirement	Notes
EQT022, EQT023, EQT024 (Continued)	NSPS – Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60.110b(a)]	DOES NOT APPLY. Tanks do not store volatile organic liquids.

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Prevention of Significant Deterioration (PSD)/Nonattainment Review

A complete PSD and non-attainment review including a "top-down" BACT/LAER analysis is not required for this permit renewal and modification.

Streamlined Equipment Leak Monitoring Program

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Louisiana Station No. 1	Not Applicable	-	-

MACT Requirements

The Louisiana Station No. 1 Electrical Generating Plant is exempt from state MACT requirements according to LAC 33:III.5105.B.2.

CAIR

On July 11, 2008, the United States Court of Appeals for the District of Columbia Circuit (the Court) vacated and remanded EPA's CAIR rule (State of North Carolina V. EPA (No. 05-1244)); however, the Court has not yet issued a mandate to make its decision effective. In the event the decision becomes effective, no source covered by this permit shall be subject to the requirements of LAC 33:III.506 and 40 CFR 97. If the court decision becomes effective, the CAIR permit will be terminated and any specific conditions in the Title V permit implementing CAIR will be null and void and removed in the next permit modification.

Air Quality Analysis

Emissions associated with the proposed modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

V. PERMIT SHIELD

A permit shield per 40 CFR 60.6(f) and LAC 33:III.507.I was not requested by the applicant.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

VI. PERIODIC MONITORING

Source	Monitor	Method	Citation
EQT008, C1 - Unit 1A Boiler EQT009, C2 - Unit 2A Boiler EQT010, C3 - Unit 3A Boiler	Process Gas H ₂ S Content	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1
	Process Gas Consumption Rate	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1
	Gas/Liquid Fuel Usage	Totalizing fuel meter	LAC 33:III.2201.H.1.b.i
	Oxygen / Carbon Dioxide Concentration	Performance Specification 3 of 40 CFR 60, Appendix B	LAC 33:III.2201.H.1.b.ii
	Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	LAC 33:III.2201.H.1.b.iii 40 CFR 75
	Carbon Monoxide emissions	Fuel/Oxygen Window in Facility-Wide Averaging Plan	LAC 33:III.2201.H.1.b.vi
	Natural Gas, No. 2 Fuel Oil, Refinery Fuel Gas Throughput	12-Month rolling average	LAC 33:III.509
	Condensate Throughput	12-Month rolling average	LAC 33:III.501.C.6
EQT008, C1 - Unit 1A Boiler EQT011, C4 - Unit 4A Gas Turbine/HRSG	Fuel consumption & water or steam to fuel ratio	By Continuous Monitoring System (CMSs)	40 CFR 60.334(a) LAC 33:III.509
	Carbon Dioxide as a diluents for Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	40 CFR 60.334(b) 40 CFR 60.44b 40 CFR 75
	Fuel Sulfur Content	Methods in 40 CFR 60.335(b)(10)	40 CFR 60.334(h)(1)
	Process Gas H ₂ S Content	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1 LAC 33:509
	Process Gas Consumption Rate	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1
	Fuel Usage	Totalizing fuel meter	LAC 33:III.2201.H.3.b.i
	Oxygen / Carbon Dioxide Concentration	Diluent monitor	LAC 33:III.2201.H.3.b.ii
	Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	LAC 33:III.2201.H.3.b.iii
	Carbon Monoxide emissions	According to Facility-Wide Averaging Plan	LAC 33:III.2201.H.3.b.vi
	Natural Gas & Refinery Fuel Gas Throughput	12-Month rolling average	LAC 33:III.509

Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186

Source	Monitor	Method	Citation
EQT012, C5 - Unit 5A Gas Turbine/HRSG	Fuel consumption	By Continuous Monitoring System (CMSs)	40 CFR 60.334(a) LAC 33:III.509
	Carbon Dioxide as a diluents for Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	40 CFR 60.334(b) 40 CFR 60.44b 40 CFR 75
	Fuel Sulfur Content	Methods in 40 CFR 60.335(b)(10)	40 CFR 60.334(h)(1)
	Process Gas H ₂ S Content	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1 LAC 33:509
	Process Gas Consumption Rate	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1
	Fuel Usage	Totalizing fuel meter	LAC 33:III.2201.H.3.b.i
	Oxygen / Carbon Dioxide Concentration	Diluent monitor	LAC 33:III.2201.H.3.b.ii
	Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	LAC 33:III.2201.H.3.b.iii
	Carbon Monoxide emissions	According to Facility-Wide Averaging Plan	LAC 33:III.2201.H.3.b.vi
	Natural Gas & Refinery Fuel Gas Throughput	12-Month rolling average	LAC 33:III.509
	Process Gas H ₂ S Content	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1 LAC 33:509
	Process Gas Consumption Rate	By Continuous Monitoring System (CMS)	LAC 33:III.1511.C.1
	Nitrogen Oxides emissions	Continuous Emission Monitor (CEMs)	40 CFR 75
	Natural Gas, No. 2 Fuel Oil, Refinery Fuel Gas Throughput	12-Month rolling average	LAC 33:III.509
Operating time during Ozone Season	5-Month rolling average	LAC 33:III.501.C.6	

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

**Entergy Gulf States Louisiana, LLC
Louisiana Station No. 1 Electrical Generating Plant
Baton Rouge, East Baton Rouge Parish, Louisiana
Agency Interest Number: 1186**

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.